

Shortlist announced for ISWAN Photo Competition 2017

After a fantastic response from seafarers around the world, we are delighted to announce the shortlist for the ISWAN Photo Competition 2017.

This year's competition received over 600 photographs giving a fascinating insight into the daily life of a seafarer, from duties such as maintenance, inspections and drills, to on-board exercise sessions and leisure activities including shower parties on deck and barbecues.



Entries were submitted by a total of 152 seafarers of at least 18 different nationalities across four continents, demonstrating the diversity of this often-overlooked profession. Amongst the entrants were six female seafarers and a range of positions from ordinary seaman to chief cook to master.

The judging panel will now decide on the winner and runners-up from the shortlisted photographs and the result will be announced in the upcoming weeks.

Project MARTHA report highlights growing levels of fatigue in seafarers

InterManager, the trade association for in-house and third party ship managers, together with The Warsash Maritime Academy, recently presented the results of its fatigue study, Project MARTHA, to the International Maritime Organisation (IMO). The report highlights growing levels of both physical and mental fatigue in seafarers, particularly amongst

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Masters and Watch Keepers.

According to the report, results indicate that as voyage length increases, fatigue and stress increase and motivation decreases. This has not only safety implications on board due to poorer performance, but also long-term physical and mental health effects on the seafarer. These results are timely considering the subject of mental health and wellbeing amongst seafarers being particularly topical.

Speaking at the presentation last month, InterManager's Secretary-General Capt Kuba Szymanski urged the maritime industry to take notice of the findings as the industry recruits aspiring seafarers. Addressing IMO delegates and invited guests, Capt Szymanski said: 'Our people are our assets and we need to develop a strategy whereby shipping is once again seen as a career of choice for tomorrow's young talented people.

'There is no avoiding the fact that the global fleet is increasing and more manpower is needed. However, we are demanding more from current seafarers rather than recruiting even more cadets into the market. Attracting new seafarers and retaining them will test the industry, but we cannot ignore these findings in making the industry an attractive place for aspiring seafarers.'

Maritime welfare organisations meet to ITF Seafarers' Trust releases main findings of Port-Based Welfare Services Survey 2016

The ITF Seafarers' Trust has released the main findings of its Port-Based Welfare Services Survey 2016, in which a total of 957 seafarers took part.

Access to shore-based welfare facilities is a key component under the Maritime Labour Convention of 2006 (Regulation 4.4). The objectives of the survey included to document the frequency of service use by seafarers and measure trends between 1996, 2006 and 2016 results. The survey also aimed to understand the importance, priorities and concerns of seafarers as to the provision of port-based welfare services, as well as any associations between respondents' age, rank and type of ship.

The Summary Report summarises the survey's findings along with the key conclusions drawn on internet access, access to shore leave, welfare workers and Seamen's Clubs.

Roger Harris, Executive Director of ISWAN, said: "ISWAN welcomes this study which gives us valuable insight into the importance of port-based welfare services to seafarers. The results reaffirm the vital need for strong partnerships across the shipping industry to ensure the

highest quality services for seafarers in port. This is a key aim of ISWAN's International Port Welfare Partnership Programme (IPWP) which will be formally launched in September 2017.

"This Survey from the Seafarers' Trust and a recent study on Port Levies systems in North America by NAMMA help to show the areas which need most attention from projects such as the IPWP."

Two Marine (Chief) Engineers Convicted By DoJ for Environmental Crime

A federal jury in Charleston, South Carolina, late on 22 February, convicted two chief engineers of the vessel, T/V Green Sky, of falsifying documents in order to conceal illegal discharges of oily bilge waste and obstruction charges, announced Acting Assistant Attorney General Jeff Wood of the Justice Department's Environment and Natural Resources Division and U.S. Attorney Beth Drake of the District of South Carolina.



Herbert Julian, who served as chief engineer of the vessel from Aug. 3 to Sept. 4, 2015, was convicted of two felony counts under the Act to Prevent Pollution from Ships (APPS) and for obstruction of justice. Panagiotis Koutoukakis, chief engineer from Feb. 1 to Aug. 3, 2015, was convicted of two felony counts, one for APPS and another for falsifying records.

In addition, it was revealed in court documents, which were unsealed after the verdicts were rendered, that Aegean Shipping Management, S.A., a foreign company with operations in Greece that acted as the Green Sky's operator, previously pleaded guilty to a violation of the APPS and obstruction of justice.

"This case involved egregious violations of U.S. and international laws that are key to protecting the oceans from pollution, and deliberate efforts to mislead Coast Guard officials about these criminal acts," said Acting Assistant Attorney General Wood. "Now these defendants have been held accountable under the law by a jury of their peers. The Department of Justice will continue to aggressively prosecute criminal acts that pollute the oceans."

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From the Editor's Desk



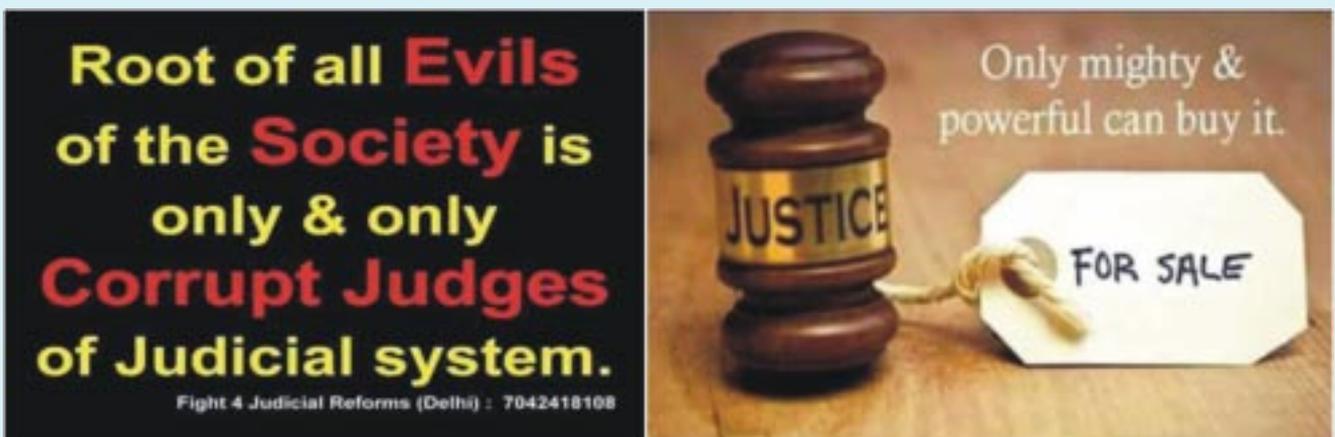
BE choosy to navigate the mind for each moment of our precious life, in our daily lives, at work, relaxing etc. To achieve excellence through pathway to perfection, which is optimized utilization with varying attributes. A researchful and resourceful mind, tries to keep pace with the explosion of interests, ways and methods to choose and be selectful, that goes around in the brain in the form of thoughts to direct the mind. Healthy minds need the required nourishing for consistency to give mindfulness with the required activeness and alertness to desired chosen work in hand thereby assesses the mindful traits of participants, asking if, for example, they often criticize themselves “for having irrational or inappropriate emotions.” In analyzing the answers, the researchers found that mindfulness did indeed lead to increased helping behavior. They also found that two facets of mindfulness-present-focused attention and nonjudgmental acceptance-specifically encouraged people to experience emotions like compassion, joy, or elevation during the act of helping. It's not easy teaching mindfulness to teenagers. Yet teens, especially troubled ones, might stand to gain more than most by cultivating moment-to-moment awareness. A new study finds there may be a link between the mind of a mother and the health of her infant. A Dutch and Belgian team of researchers gave 90 mothers with 10-month-old babies surveys designed to measure their levels of mindfulness and anxiety, asking such questions as whether they are “open to the experience of the moment” or if they “observe mistakes and difficulties without self-judgment.” The team then asked about the babies, to gauge their health and development, and found very strong evidence that mindful traits in moms are associated with better outcomes for the babies. This is a new area of study, but the preliminary results suggest that mindfulness training for pregnant women sure couldn't hurt!

Role of Ethics in Finance: Financial markets today are continuously evolving. Structural, regulatory and technological changes and are in a state of almost perpetual motion. Competition seems to intensify by the second, while the potential gains get correspondingly slimmer. In this seeming maelstrom of shifting and clashing landscapes, do ethics still have a place of prominence? What should the priority be, make money or play by the rules? Does the end truly justify the means? View the state of AFFAIRS..The world of finance is often equated with clandestine deals and cutthroat competition. The 2008 financial crisis further endorsed this image of "agent gone rogue", as it is believed to have been largely perpetuated by the desire of money managers and investment professionals to make more money. Ethical standards were compromised and financial reporting became increasingly opaque. Rooted in the United States, it soon had a domino effect and lead to a complete collapse of the global economy, destroying businesses, companies and careers in its wake. Ethics is not just about having moral value at an individual level. For firms and money managers it is about having an uncompromising code of conduct, strict adherence to risk management and compliance with the regulatory framework. The Josephson Institute of Ethics aptly describes ethical behaviour as, "how we meet the challenge of doing the right thing when that will cost more than what we want to pay." Transparency on the other hand is all about communicating information. It is about the receiver having full access to complete and unfiltered information. The financial industry is at the centre of the economy and acts as a conduit between savers and consumers of money. It is akin to a financial lever which facilitates flow of capital in the economy. The role of the financial industry, in the growth and productivity of the economy, cannot be overemphasized. It is the common thread that ties together all facets of the economy and has a significant socio-economic impact. The financial industry has myriad stakeholders and it is for this very reason that ethics and transparency should assume higher

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importance for the industry. A large part of the financial markets is based on trust - trust that both or all parties involved will honor their part in their agreement - and prices are decided accordingly. If that trust breaks down, so does the contract and so does its pricing. A destruction of confidence leads to spiraling counterparty risks, demands for a higher risk premium and raises the overall cost of capital in the economy. We have seen this play out in the multiple crises that keep hitting our markets, from Harshad Mehta to the Dot com bust, from Enron to Lehman Brothers, from the Libor scandal to the 2G Spectrum scam. The hits keep rolling in. Bubbles or scandals, there's usually a breakdown of ethics behind the mess as some individual or group exploits loophole that was there for the taking. So the question arises: what is more important? Limited time gains achieved by any means necessary, or steady gains and a steady relationship over the long term? Do we focus on quarters or decades? The answer to that would depend upon the importance of ethics. If the focus is on maximizing revenues for one or two quarters and no more, then certainly, ethics might not be that important. Take the money and run. However, if you intend to be around for decades and intend to build your relationships to last several decades, then you would need to be able to weather multiple downturns, not just ride the upturn. In that case, ethics will need to be your priority. A long-lasting relationship is built and strengthened on trust. Trust between you and your customers, your regulators and your competition. Good ethics is like the equity that you can bank upon. Generally it has been observed that there is not just intangible, but also tangible value to an organization of ethics and management transparency. Good ethics and transparency is also good business. The reputation that a firm builds for ethical and transparent behaviour can be a more valuable asset than any financial gains. Ethics and profitability are not mutually exclusive and can co-exist, as demonstrated by a number of firms across industries that have chosen to stay true to their values in the face of lucrative and quick financial gains. Firms that have been able to create a robust moral fabric enjoy good credibility and respect from stakeholders. On account of the rampant corruption. "Laws are introduced in society, as an instrument of Social Change" *Why the same lacks in proper implementation, by regulation/monitoring, by the Law & Order Authorities? Placements to have been made, to only those who have the aptitude, competency and the passion to actually work efficiently. While needing meticulous care in recording, though mere clerical work that is involved with modern techniques, considering accuracy, speed, time and money RESPECT is earned. HONESTY is appreciated TRUST is gained. LOYALTY is returned.



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"With Charleston serving as one of the largest ports on the Eastern seaboard, working vessel pollution cases with the Environmental Crimes Section is an important focus for our office," said U.S. Attorney Beth Drake, District of South Carolina. "Through criminal charges, we can deter those who would dump oily wastes into the world's oceans and use false documents to cover it up."



"The Green Sky case stresses the vital importance of USCG environmental protection missions with regard to pollution from ships," said Captain Gary L. Tomasulo, Commander, U.S. Coast Guard Sector Charleston. "We are extremely proud of our team of marine safety professionals and the Coast Guard Investigative Service which were an integral part of investigating these occurrences and referring them for enforcement action."

The Green Sky is a large, oceangoing chemical tanker flagged in Liberia. The vessel first set sail in July 2014. The operation of marine vessels, like the T/V Green Sky, generates large quantities of oil-contaminated waste water. This particular vessel had unusual internal leaks that produced greater quantities of oily waste than a normal ship of its age and construction.

Oily bilge waste must be removed from the vessel lest it fill up the bottom of the Engine Room and cause damage to equipment and jeopardize the safe handling of the ship. However, the law does not permit an oceangoing vessel to discharge these oily wastes directly into the sea.

The evidence presented to the jury showed that the Green Sky was regularly pumping contaminated and oily water directly overboard. None of these discharges were disclosed as required. The oil record book of the Green Sky was falsified to cover-up illegal overboard discharges of oily wastes from February to August 2015.

Methods of falsification included omitting illegal bypass operations, claiming that the oil water separator was used when it had not been, and a series of false entries regarding the levels of the bilge holding tank, which were designed to further the cover-up. While most of these

discharges occurred in international waters, evidence at trial revealed that at least two of these discharges were within the Exclusive Economic Zone of the United States during the ship's voyage from Pascagoula, Mississippi, to Houston, Texas in May 2015.

The evidence presented during the fifteen-day trial demonstrated that the chief engineers covered up illegal overboard discharges that took place through two systems of "magic" hoses and a separate "magic" valve system designed to bypass the ship's oil water separator. Koutoukakis and Julian falsified the oil record book to hide their illegal discharges.

The vessel arrived in Charleston, South Carolina on August 26, 2015, when the false record was presented to the U.S. Coast Guard during an inspection of the vessel. The U.S. Coast Guard was tipped off by three whistleblowers who came forward to report the crimes and ask for protection from U.S. authorities.

By January 2016, it was determined that the former chief engineer Koutoukakis likely had information regarding the ongoing investigation into the Green Sky. Koutoukakis was later apprehended in Savannah, Georgia on a material witness warrant. Koutoukakis was subsequently indicted after further investigation revealed his substantial involvement in illegal discharges and records falsification.

In addition, Julian was convicted of obstruction related to false statements that he made regarding the ship's sounding log, which is a document that can be used to check the veracity of the oil record book. Testimony at trial revealed that Julian hid the log prior to the Green Sky's arrival in Charleston and then lied to the Coast Guard about the vessel having a sounding log.

Prior to the initiation of the trial, on November 22, 2016, the Green Sky's operator, Aegean Shipping Management, S.A. pleaded guilty to one APPS count for the illegal discharges and one obstruction count based on misrepresentations made by the vessel's captain to the U.S. Coast Guard during the August 2015 boarding. The corporate vessel operator had been indicted along with the individuals on July 15, 2016. The plea materials were previously sealed to protect the integrity of the jury and the witnesses in the trial against the individual defendants.

The unsealed documents revealed that the operating company agreed to pay a financial penalty of \$2 million, which includes a criminal fine and a smaller community service component directed toward the Gray's Reef National Marine Sanctuary. The company will also be sentenced to probation and an environmental compliance plan. Sentencing of the company and defendants Julian and Koutoukakis will take place at a date that will be set by the court. At trial, the second engineer Nikolaos Bounovas was acquitted of all charges against him. The previously convicted Captain, Genaro Anciano, testified at the trial. His sentencing has yet to be scheduled.

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This case was investigated by the U.S. Coast Guard Sector Charleston and the Coast Guard Investigative Service. The USCG Marine Safety Lab was critical to the analysis of oil samples taken from the vessel. With the support of Coast Guard Legal District Seven, the case was prosecuted by Christopher L. Hale and Kenneth Nelson of the U.S. Department of Justice's Environmental Crimes Section and AUSA Matt Austin from the U.S. Attorney's Office for the District of South Carolina. Richard Udell, also of the Environmental Crimes Section, provided substantial assistance with regard to the corporate plea deal.

Background on MARPOL

A multi-national treaty, the MARPOL Protocol, and implementing U.S. law required the Green Sky to first process the oily bilge waste through a filtration machine, known as an oil-water separator. Before the bilge waste can go overboard, the law requires that any remaining

petroleum should be reduced to a concentration of 15 parts per million (ppm) or less. Bilge waste that contains 15ppm or less of petroleum does not produce a sheen and looks like clear water when held up to the light.

One of the principal ways that the MARPOL Protocol ensures that international vessels comply with the oil water separator requirement is through the mandate to accurately maintain the vessel's oil record book. The oil record book is an official ship's log that records various types of internal transfers and discharges of fuel, oil residue, and oily bilge wastes. Under MARPOL, when a ship comes to a U.S. port, its oil record book is subject to inspection.

When the oil record book is falsified, it makes it extremely difficult for port control officials (in the United States, the U.S. Coast Guard) to adequately assess treaty compliance and the safe and environmentally sound operation of the vessel.

World InfoDesk

Banks at Risk Over Climate Change: Carbon War Room (CWR) and University Maritime Advisory Services in the U.K. have released research that suggests climate transition pathways pose risks to the banks that hold \$400 billion of global shipping debt.



With the onset of climate policies as soon as 2023, there will be a need for significant capital investment to keep vessels competitive. Navigating Decarbonisation: An approach to evaluate shipping's risks and opportunities associated with climate change mitigation policy lays out an approach to climate stress-testing of shipping assets and proposes that enhanced due-diligence undertaken today by financiers, shipowners and shareholders can help deliver long-term value and avoid losses by the mid-2020s.

By examining outcomes of investment approaches in a range of future scenarios in the newbuild dry bulk fleet, the research assesses whether the industry is exposed to climate policy-driven risks and how to manage these risks.

This is the first known scenario analysis of decarbonization risks in shipping, says CWR. Project finance and corporate lending to the international shipping industry has long been big business for major financial institutions. The 18-month project identified that while some financial stakeholders

are aware of stranded asset risks, few banks assess ship efficiency or have lending programs in place to keep assets competitive.

Navigating Decarbonisation is the third instalment of research on stranded assets and climate risk in shipping from CWR and UMAS. It offers a method to analyze how GHG mitigation policies in shipping and national contributions under the Paris Agreement could impact existing and future investments in shipping.

James Mitchell, senior associate for shipping with Carbon War Room, says: "Risk is nothing new to the shipping industry or to the major financial institutions that bankroll it, but climate transition risk is. If a newbuild financing decision is made today, that vessel will very probably have to compete under new IMO or E.U. policy actions before its first drydock. This work suggests that these risks will impact the market and should be considered now."

Close Encounters and Dangerous Designs:

The latest issue of U.K. charitable trust CHIRP's Maritime Broadcast discusses dangerous ship designs, a close encounter with a ferry and an uncontrolled release of a blocked pipe. These are some of the topics discussed in the organization's report Maritime FEEDBACK 45.

The Confidential Hazardous Incident Reporting Programme (CHIRP) aims to seek out root causes for near misses, without blame, identify the lessons learned and to consider how best this information can be used to prevent reoccurrence elsewhere in the maritime industry.

Remembering the Leros Strength: Twenty years ago this month, on February 8, 1997 the master of the Leros Strength contacted the rescue co-ordination center in Stavanger, Norway, requesting immediate assistance. After approximately three minutes the radio

contact was abruptly cut off. It was subsequently determined that the ship had foundered and her crew of 20 was lost.



The Leros Strength was a 20 year old medium sized bulk carrier. She had loaded about 18,000 tons of apatite (a phosphate mineral commonly used in the production of fertilizer) in Murmansk. Sailing with a crew of 20 she was bound for Poland. During the days before her loss, she ran into worsening (but not unexpected) weather - wind speed 35 knots, with four meter wave height. At the time of her loss, off south western Norway, no other ships were reported to be in difficulties due to the weather. It seems probable that water had ingressed progressively into the forward compartments during the night and that the master first became aware of the gravity of the situation when the daylight broke (sunrise occurred at 07.36 a.m., and the radio conversation started at 07.50 a.m.).

The master noted that the bow was submerged up to number one hold that the ship was difficult to handle and started pumping operations from the forward compartments. It is highly probable that when the master was in contact with the rescue co-ordination center in Stavanger, the vessel's forepeak no.1 and no.2 cargo holds were flooded, with additional flooding progressing. While reporting this, communication suddenly ceased - presumably a catastrophic event resulted in the rapid sinking of the ship which also eliminated the possibility of any planned abandonment by the crew.

Both the Cypriot (flag state) and Norwegian (coastal state) authorities investigated the sinking of the Leros Strength. If the causes could be established, this could possibly be a basis for proposing new/revised regulations or procedures related to bulk carriers, thereby - in the longer term hopefully contributing to preventing similar casualties in the future.

The investigations included an underwater investigation of the wreck and a review of the class survey records. They were not able to identify with certainty the specific direct cause of this accident.

However, from other available information it is possible to identify the direct cause in general terms, which was clearly "ingress of water into the fore part of the ship". Both the Cypriot and Norwegian reports focused to large extent of the class survey records, and in particular the fourth special survey. Around the time of this survey due date, the ship transferred class to another society.

INTERTANKO (the voice of independent tanker owners) commented on the Norwegian Report with the following:

The report questions once again important classification issues such as surveys and the transfer of class procedures and provides the following recommendations:

- Survey reporting needs to be significantly improved
- The principle of "negative reporting only" should be generally banned from survey reporting
- Standard terminology for reporting should be agreed and made mandatory
- The possibilities for splitting up a given survey between different survey stations should be restricted
- Repairs of items relevant for structural integrity should always be planned beforehand in co-operation with the classification society
- No deferral of repairs previously required by a surveyor should be allowed, unless so decided by the head office
- Three months extension of the five-year period for continuous trading is not permitted according to the SOLAS Convention, and must be banned in practice
- Renewed consideration should be given to the length limit for SOLAS Ch. XII (presently 150m) so as to make these requirements applicable also for bulk carriers similar to Leros Strength
- Consideration should be given to requiring more than one surveyor to carry out Special Survey for ships above a certain age; alternatively requiring supervision of parts of this survey by a surveyor from the Flag State itself
- No transfer of class should be allowed until the losing society has confirmed that all outstanding recommendations have been rectified
- When a periodical survey is due, no transfer of class should be allowed until the complete survey has been carried out by the losing society with satisfactory results.

During the 1990's bulk carrier safety was noted by the IMO and International Association of Classification Societies (IACS) as an important safety concern - during the years 1990 - 1997 ninety-nine bulk carriers and over 650 lives were lost.

SOLAS Chapter XII - Additional Safety Measures for Bulk Carriers- was enacted and amended several times by IMO.

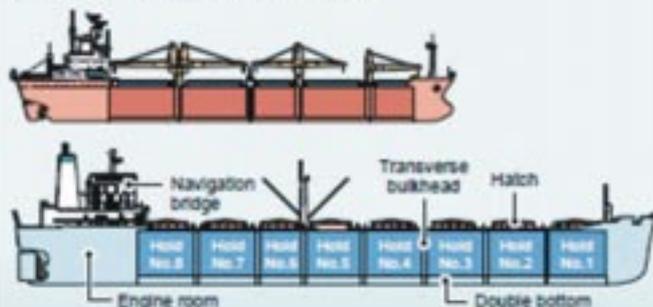
The Leros Strength incident and reports provides several lessons:

- The importance of early recognition and reporting of a developing emergency situation.
- The importance of adhering to, and enforcing, ship survey standards.
- The significance of casualty investigation, which looks at the direct and underlying causes of incidents to help prevent future incidents.

Improving the safety of bulk carriers



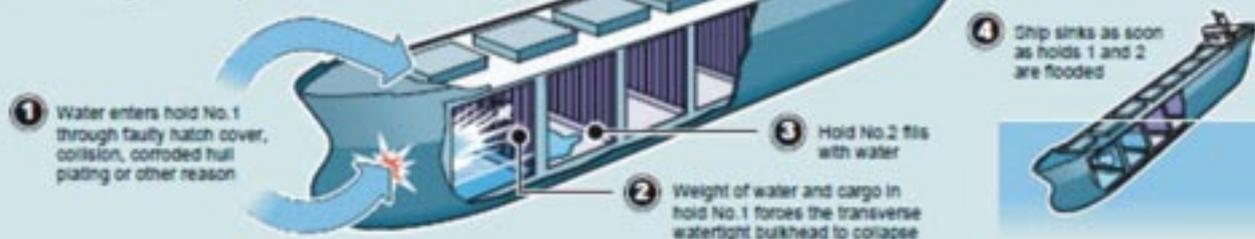
Modern bulk carriers, often described as the workhorses of the maritime trade, can be traced back to the 1950s when shipyards began building ships designed specifically for carrying non-packed commodities. Bulk carriers can be identified by the hatches above deck level which give access to the huge cargo holds below.



Number operating worldwide:	5,500 (approx)
Typical length:	180 - 275 metres
Typical deadweight:	33,000 - 150,000 tonnes
Number of cargo holds:	5 - 9
Principal cargoes:	Grains, coal, iron ore, bauxite, phosphate, nitrate
Total amount of all cargoes transported, 1996:	1,795 million tonnes
Number lost at sea, 1990 - May 1997:	99
Lives lost:	654

Structural failure and flooding

Bulk carrier losses in the early 1990s were dramatic: ships sank rapidly, often with the loss of all lives. Many were old and had suffered structural damage. A study by IACS (International Association of Classification Societies) found that after flooding in the foremost hold, the bulkhead between this hold and the adjacent hold can collapse from the pressure of cargo and water, leading to progressive flooding and sinking.



The dangers with two holds flooding

A study by the U.S. Maritime Administration (MARAD) found that a typical midsize bulk carrier should survive all one-hold flooding so long as the ship is not suffering from metal wastage and undetected cracks but flooding of any two holds would have disastrous consequences.



Holds 1 & 2 or 2 & 3:
Ship sinks rapidly, no time for crew to abandon ship.



Holds 6 & 7: Submergence of the after deck and possible catastrophic down-flooding in the engine room.



Remaining holds: Sagging, which could cause structural failure, especially if the ship is poorly maintained.

Making bulk carriers safer

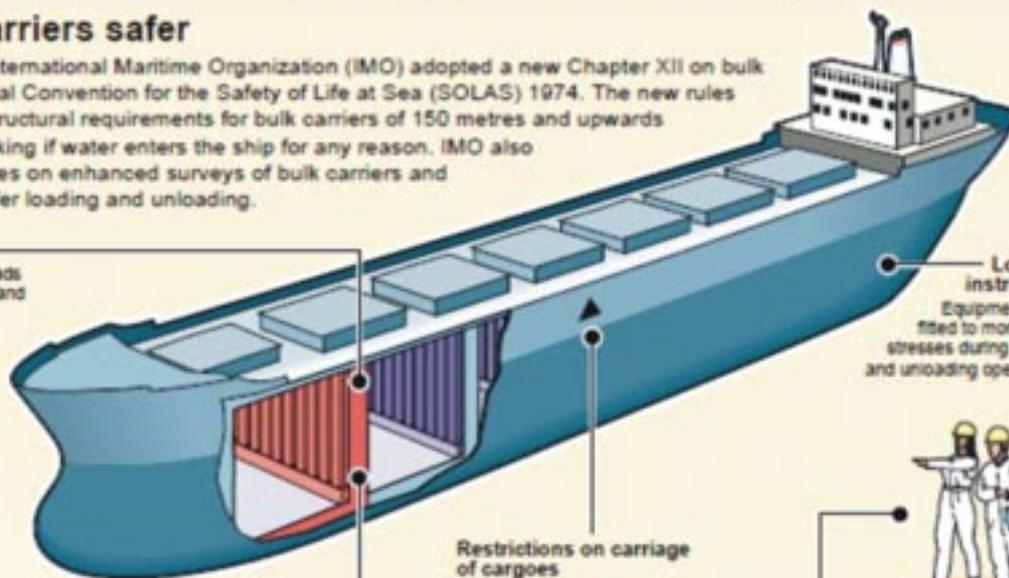
In November 1997 the International Maritime Organization (IMO) adopted a new Chapter XII on bulk carrier to the International Convention for the Safety of Life at Sea (SOLAS) 1974. The new rules cover survivability and structural requirements for bulk carriers of 150 metres and upwards to prevent them from sinking if water enters the ship for any reason. IMO also adopted revised guidelines on enhanced surveys of bulk carriers and a code of practice for safer loading and unloading.

Stronger new ships

Increase the strength of bulkheads and the double bottom to withstand hold-flooded conditions.

Improving cargo handling practices

Conveyor belts (several kilometres long) often overload ships. Huge grabs (up to 36 tons), bulldozers and hydraulic hammers used for unloading can cause structural damage.



Existing ships

The bulkhead between holds 1 and 2 and the double bottom of hold 1 must be strengthened to withstand flooding in hold 1 unless loading restrictions are imposed.

Restrictions on carriage of cargoes

Existing bulk carriers which meet the new structural requirements by means of loading restrictions must be marked with a solid equilateral triangle on the hull at midships below the deck line.

Enhanced surveys

Enhanced programme of inspections to detect potential structural weakness and areas of corrosion.



Rapid Fire Insulation for Statoil Mariner Offshore Platform Delivered Successfully:

The rapid four-week installation of an ultra-lightweight fire insulation blanket from Morgan Advanced Materials is providing extensive thermal protection for three separator vessels on the Statoil Mariner offshore platform.

Morgan's FireMaster vessel fire protection system is being used to maintain structural integrity of the separators against jet and hydrocarbon pool fires. Fire protection is crucial because these separators contain hydrocarbon inventory, which can become additional fuel to a fire in the event of structural failure. Thermal weakening and failure occur when the walls of the separator are heated by the exposing fire case.

With increased temperature of the steel vessel shell, the applied stress on it increases, causing rupture. Morgan's FireMaster protection ensures that the steel shell temperature does not reach breaking point as temperatures surge.

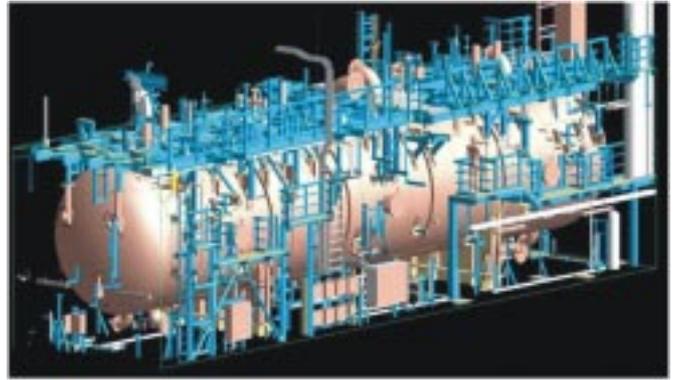


The design fire scenario stated that the separators should be able to withstand fire loads of five minutes of jet fire at 350w/m², followed by five minutes of jet fire at 250kw/m², and an additional 50 minutes of hydrocarbon pool fire. Morgan's FireMaster solution was considered the most effective and easy-to-install option for the project, which had to be completed within the space of just one month.

A lightweight solution for faster insulation

The initial plan for the project prior to Morgan's involvement was to use traditional cellular glass, alkaline earth silicate wool, and stainless steel cladding. However, the project party agreed that it would be more beneficial to seek out a lighter, more immediate insulation solution. Morgan's FireMaster vessel protection system met this brief, chosen for its strong and proven resistance to fire, its ability to provide a tested and certified solution for vessels, and its low rate of water absorption. The approach was to provide fire protection using FireMaster blanket alone with stainless cladding applied over the blanket to provide the necessary protection against erosion from the jet fire.

Upon receiving the design information, Morgan used its significant database of jet fire testing to validate finite



element modelling to calculate the specified insulation thickness required to satisfy the critical temperature requirements of the vessel shell. With the tight project timescale in mind, this process was accelerated and Morgan's team of engineers advised that the first stage separator would require an insulation thickness of 50mm, with the second stage separator and test separator requiring a thickness of 63mm*.

The penetrations, which were to be insulated after erection, would require a coatback of 150mm to reduce the heat input into the vessels. Consideration also had to be given to the nozzle welds, which are inspected after one year and subsequently every five years following that. To facilitate easy access, the inspection hatches were installed according to Statoil's own insulation handbook.

Three installation teams worked in tandem, to complete the insulation on time. Having all separators in one hangar allowed the teams to rotate around each separator in turn, by discipline. One team carried out the mesh work before moving to the next separator, while the insulation team came in behind on the separator that was vacated, followed later by the cladding team.

Collaboration key to meeting tight deadline

A key contributing factor to the fast and successful insulation of the separator vessels was the close collaboration between all parties involved in the project; Statoil, Daewoo Shipbuilding and Marine Engineering (DSME), and Morgan Advanced Materials. Utilising their combined experience of thermal insulation in marine and offshore systems, the businesses were able to remain



instantly responsive to external factors surrounding completion of the work, from the outset.

The FireMaster vessel system uses stainless steel mesh to support the FireMaster blanket. To minimise any damage to the vessel paint coating and the potential for corrosion under insulation, the fixing mesh was set off from the vessel surface using strips of Teflon.

The subsequent air gap between the vessel surface and the wire mesh provided ventilation and reduced the risk of trapped water building up underneath the insulation. This further minimised the potential for corrosion under the insulation, which is a typical issue experienced in applied offshore insulation projects. The blanket was then encapsulated to reduce the potential for water absorption into the insulation system, helped by a FireMaster water repellent blanket.

Allan Beeston, Global Fire Protection Manager at Morgan Advanced Materials took the lead on the project. He commented: "This was a particularly challenging project due to the tight timescales we had to meet, and the restraints around insulating the penetrations on the top side of the separators. Indeed, one of these vessels is extremely geometrically complicated, so the use of a product that is easily adapted to suit complex shapes was key.

"We were fortunate in that the design of our FireMaster insulation blanket lends itself to fast installation, but we could not have made this project such a success without the co-operation and collaboration of all the parties involved. Everyone was open to suggested new ways of working to accommodate the short timescale, and this attitude led to a successful job completed on time, amid several challenges."

* DMSE and Statoil agreed to install the Lloyd's Registry certified system of 88mm thickness.

Connectivity Boost To Far East & S.E. Asia By HMM's Weekly ACS Service: A direct weekly service of HMM's (Hyundai Merchant Marine) ACS Service was flagged off, amid lot of fanfare, from Krishnapatnam Port Container Terminal on the 17th February 2017. Inauguration of the maiden vessel call by "M.V. HYUNDAI PRESTIGE", as part of ACS's Service, has written a new chapter in the EXIM trade from East Coast of India.

The KPCT team conducted a formal inaugural ceremony commemorating the maiden call with Mr. Y.D Park (MD, Hyundai Merchant Marine India) & Mr. Anil Yendluri (CEO, Krishnapatnam Port) launching the service from KPCT. Mr. Jithendra Nimmagadda (COO, KPCT) welcomed the vessel by presenting a memento to the vessel Captain Musteata Loan. Sales, Operations and Customer service teams of Hyundai Merchant Marine and their agents Choice Group along with KPCT team were part of this memorable inaugural event.

The port rotation of this Service is: Krishnapatnam - Port



Klang - Singapore - Pusan - Ulsan - Shanghai - Hongkong - Yantian

This weekly service will provide fastest and most competitive service to the Exporters / importers of Andhra Pradesh, Telangana, Karnataka and Northern Tamil Nadu fastest connectivity to the ports of Port Klang, Singapore, China, Busan, US West Coast and European markets.

KPCT has always been at the forefront of Indian port sector by providing state-of-the-art facilities, customer-centric services and unparalleled operational efficiencies, which is improving the competitiveness of Indian EXIM community in the Global trade. Several Mainline carriers have started their services from KPCT as the support of exporters and importers to KPCT grew exponentially.

HMM team announced that this service was possible due the immense support received from the EXIM trade particularly from exporters of Tobacco, Shrimps, Cotton, Granite, Buffalo meat, Chillies, etc. and Importers of Solar panels, Furniture, Pharmaceuticals, Timber, etc. and due to the World-class facilities of KPCT.

22 Important Points For Vetting Checklist Of Ship's Third Officer: Vetting is the evaluation of the potential risks such as the ship's structural integrity, competence of owners, managers and crew, past casualties and incidents. It is a grading system of a ship, enabling a potential charterer to compare between similar ships and choose the best for his needs to maximise efficiency.



The time right before vetting is a tiring period. Everything within the vessel must be checked for their operational integrity rendering officers and the crew to toil endlessly to ensure everything in place. Even if checks are carried out regularly, the time before vetting calls for everything to be rechecked and verified.

Following is checklist that may be followed as reminder of things to be inspected:

1. Safety Familiarisation

It must be ensured that all familiarisation forms are duly filled. The safety familiarisation must be carried out within 24 hours of joining the ship.

The evidence of crew training being carried out by Master should be available onboard. The record of familiarisation with all equipment and machinery are to be carried out before assigning ship board duty.

2. Drill

The full drill planner along with the drill matrix must be displayed on the bridge so that all officers remain informed about the same. The minutes of the drill just be duly recorded with all the proceedings well listed out. The absentees for drills must be rotated in a manner such that every crew member participates in all drills.

- Complete yearly drill plan available on board and displayed
- Record of familiarisation duly filled and filed. The same should be given to company superintendents within 24 hours of them boarding. In the remarks column, it should be stated 'Familiarised with all lifting equipment'

Fire drill minutes should include:

- Reporting to Muster Station, description of fire and explanation of the duties assigned
- Starting of fire pump, boundary cooling
- Time to readiness on the end of the firefighters with SCBA and fireman's outfit
- Testing of communication with firefighters
- Support team actions of closing vent flaps, readiness of stretcher etc.
- Few emergencies to include fire control and subsequent abandonment of ship

It must be ensured that during the drill, the following are discussed and a record of the training made:

- Operation and use of life raft
- Training of different types of fire extinguishers which are present on board

3. SOLAS and FFA training manual

These manuals are ship specific, tailored as per the equipment present and mandated for the vessel. Placed and available in the bridge as well as in the officers and crew mess. It should be promulgated as to the location

of the manuals onboard. All officers must sign the company manual after going through them.



Training manual to be checked and confirmed for the following:

- Muster list and crew list duly updated
- Donning of lifejacket, immersion suit, anti-exposure suits
- Boarding, launching and clearing survival draft
- Use of LSA
- Use of engine and accessories
- Recovery of survival draft, rescue boats including stowage and securing
- Hazards of exposure and need of warm clothing
- Retrieval methods, including helicopter gear
- Instructions for the repair of LSA

Fire fighting manuals:

- Safety practice, precautions related to smoking, electrical hazards, flammable liquids etc.
- Procedure to activate manual call point, general instructions for fire fighting
- Operation and use of fire fighting system

- Operation and use of fire doors
- Operation and use of smoke dampers
- Escape systems and appliances
- Emergency procedures with respect to chemical cargo fire
- Prevention of fire if it has spread to the cargo area due to ignition of flammable values and include procedure if cargo tank gas purging and gas freeing

4. LSA/FFA maintenance file should always be duly updated



5. Lifeboat and life raft operating instructions to be displayed as per the launching poster, should be IMO approved and under the emergency light



6. Painter must be connected to the weak link of HRU

7. Immersion Suit

The immersion suits must be periodically tested, once in every 3 months if within 10 years of manufacturing or every year.

8. Pyrotechnics

All pyrotechnics should be in good order and not expired.

- Ensure LTA is in state of readiness, within date and in good order



- Adhering to the section 7.1 of the Cide (SOLAS III/18)
- Not less than 12 rocket parachute flares shall be carried and stowed on or near the navigation bridge
- Illustrated table describing the life saving signals shall be readily available for the OOW

9. Isolation Valves

Isolation valves must be clearly marked and should be free to move. They should be operated weekly so that spanners are not needed and the movement is always free. The foam line/fire line valves and all foam valves on deck should be free to operate. Spindles should be

well greased and spanners should be available at nearby locations.

10. International Shore Connection

The international Shore Connection should be placed at or around the gangway must have all the required nuts, bolts, gaskets and 2 sets of spanner in the box.

11. IMO Symbols



All IMO symbols including those required for the engine room to be in good condition and legible to read. Lifebuoys have different symbols depending on their make and it should be checked if the appropriate sticker is placed for the specific lifebuoy

12. Expiry Dates



Confirm the expiry dates of pyrotechnics, LTA, HRU, EPIRB, GMDSS batteries, MOB marker, Lifejackets and immersion suit lights

13. Fire Plan

The fire plan in display must have all recommended symbols as per IMO resolutions A654 (16). The latest symbols must be in place. The fire plan container should have the latest stowage plan, crew list, muster list, oil spill duties, port contact list and MSDS for the latest cargo

14. Sprinklers

The sprinklers of the paint locker must be checked so that piping in in good order and valves are not leaking. The latest test date must be painted or stenciled outside for quick reference.

15. Portable Fire Extinguishers



- Ensure all extinguishers are placed closed to the entrance
- Spare cartridge and refills are provided 100% for first 10 extinguishers and 50% for remaining. Maximum spare charges need not exceed 60. CO2 spares to be provided
- Extinguishers to be hydro-tested
- Ensure there are no damages or dents on the extinguishers
- All extinguisher refilling records just be maintained

Each extinguisher should have the following markings:

- Name of manufacturer
- Type of extinguisher
- Type and quantity of extinguishing medium
- Pictorial instructions of how to use the extinguishers and recharge them
- Year of manufacturer

- Temperature range
- Test pressure

16. Firefighter's Outfit and SCBA

- Check protective clothing for damage
- Check the boot
- Safety lamp to be explosion proof
- Axe with handle should be checked

SCBA for 30 minutes:

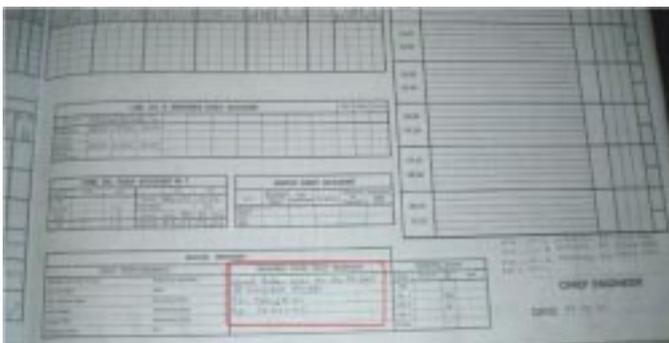


- Ensure whistle is operational
- Leak test ensures face mask integrity
- 1 spare bottle for each set
- Hydrotest done
- Pressure as per manufacturer
- Fire proof line of 30 m each
- Annual inspection to be carried out

4 SCBAs are for FFA requirements which must be clearly marked. In addition, 3 SCBAs are for IBS (Chemical PPE) requirements and they should be clearly marked as well.

17. GMDSS

GMDSS portable hand held batteries should be discharged completely once every month and recharged. The same should be logged. The spare batteries should not be expired and their deal intact. Daily position to be logged in the GMDSS log book.



18. Lifeboat

The Lifeboat should, for starters, be better and tidy. All IMO Symbols must be in place. All lights such as canopy light, search light etc. should be working.

The air bottles must be fully charged. The steering should be free on either sides. Sprinklers should be functional. Portholes should be clean. Basically, all Lifeboat parts must be checked for their operational integrity. Additionally following should be checked:

- Lifeboat engines should start on one battery only. The engine should be started twice every boat drill- one for each battery.
- Lifeboat lowering instructions in dangerous atmosphere to be posted and available under emergency light
- Lifeboat hatches free of rust and greased
- Propeller and rudder well painted

19. Liferaft



Life raft ID container to be attached and in place. Embarkation lights should be working and swirl to be free. Launching instructions to be posted under emergency light.

20. EEBD and ELSA

All EEBDs and ELSAs should be checked for their bottle pressure which are to be in the green zone. They must have a monthly inspection tag.



21. FFA

All fire doors in accommodation should be checked for closure. All fire hoses must be checked for their condition and all nozzles to be free with spanner. All hydrants should have their caps in place; there should be no leakage and the seizing wire should be present. The record of pressure testing on the fire hose must be present and updated.

22. Lifebuoy and lifejacket

The lights, buoyant lines, quick release mechanisms and self activating smoke floats must be in good order. A lifejacket should be provided for every person onboard with additional number of lifejacket for the OOWs and for use at remotely located survival draft stations. The lifejacket carried for persons on watch should be stored on bridge, ECR and other manned watch station.

"K" Line becomes Member of Indian National Shipowner's Association: "K" Line (India) Shipping Private Ltd (KLISP), affiliated company of Kawasaki Kisen Kaisha Ltd., joined Indian National Shipowner's Association (INSA) at the end of January 2017.

KLISP was established in 2014 and actively participates in Indian Coastal Trade as well as International Trade business as an Indian Shipping company. In the same year, KLISP successfully entered into a long-term CVC contract with an Indian Charterer. From December 2016, KLISP acquired ownership of an Indian flag vessel, "GANGA K" (58,000DWT Bulk Carrier) for this contract, and by acquisition of this Indian flag vessel, KLISP was officially entitled to join INSA.

By becoming an INSA member, we anticipate this will enable us to become more actively engaged in the Indian Shipping industry as well as become even more deeply rooted in activities of the local market.

The long-term goal of the "K" Line Group is to consistently render the best and most reliable service possible that will also contribute to the quality of life of the people in

India, and at the same time allow us to more actively participate in the local and continuously growing infrastructure and transportation system in India.

World's First Complete End-To-End Shipping Platform Launched: Veson Nautical, the leading provider of commercial maritime software and services, on 9 February, announced Veslink IMOSlive - the world's first complete end-to-end shipping platform optimized for the web. Veslink IMOSlive combines the existing IMOSlive cloud infrastructure with the web accessibility and partner connectivity of Veson's online Veslink solutions, creating an entirely new offering that brings robust enterprise functionality to browsers and mobile devices.



Built on the foundation of the Integrated Maritime Operations System (IMOS), the industry-standard solution for commercial maritime operations for more than a decade, Veslink IMOSlive brings the core IMOS workflows to the web. The result is the first comprehensive online platform for marine Chartering, Operations, Financials, and Analytics that serves all industry verticals. As a modern cloud application with a sleek, intuitive user interface, Veslink IMOSlive is designed for rapid deployment within an organization, bypassing infrastructure overhead and obtrusive middleware.

Stated Agya Garg, Vice President of Product, "Veslink IMOSlive reflects Veson Nautical's continued commitment to product innovation, as the introduction of mobile access to IMOS core solutions and data will truly transform the way our clients work in the office, remotely, onboard the vessel, and with business partners. Because Veslink IMOSlive is accessible on any browser or mobile device, it puts our clients' business at their fingertips."

ICS Releases Latest Flag State Performance Table: ICS has published its latest Flag State Performance Table which can be downloaded free of charge.

The Table provides an annual overview of the





performance of the world's flag states against a number of criteria such as port state control records, ratification of international maritime Conventions and attendance at IMO meetings. The Table is mainly intended to encourage shipowners and operators to maintain an open dialogue with their flag administrations with respect to any improvements that might be necessary.

ICS Director of Policy & External Relations, Simon Bennett, said:

"This year's ICS Table continues to highlight the sound performance of all of the world's major flag administrations, regardless of whether they are open registers or so called 'traditional' maritime flags. But in response to feedback from IMO Member States, our member national shipowner associations have agreed to some further refinements in order to make the Table as objective and useful as possible."

In particular, flag states which do not qualify for the United States 'Qualship 21' programme have not been given negative performance indicators in the latest ICS Table.

"The list of flag states qualifying for Qualship 21 now varies considerably from year to year. We therefore no longer currently view non-inclusion as being an indicator of negative performance" explained Mr Bennett. However, flag states that continue to qualify for the U.S. programme are still given a positive performance indicator.

An important development in the previous 12 months is that participation by maritime administrations in the IMO Member State Audit Scheme became mandatory in 2016. ICS therefore intends to add a new field to address this for inclusion in its next Annual Table in 2018.

The ICS Flag State Performance Table for 2016/2017 is now being distributed among ICS national shipowners' associations and their member companies, which cover over 80% of the world merchant fleet.

USA: Work Stoppage at Ports Would Have Ripple Effect: A proposed one-day work stoppage led by the International Longshoremen's Association at ports on the U.S. East and Gulf coasts would hit those regions hard economically, observers say.

The total value of cargo imported and exported through the Port Authority of New York and New Jersey alone exceeded \$200 billion in 2014, according to estimates provided by that agency.

"On a daily basis, that's \$547 million a day, just in goods" arriving or leaving the ports, Will Brucher, a faculty member at Rutgers University's School of Management and Labor Relations in New Brunswick, N.J., told Bloomberg BNA Feb. 23.

"If there were a work stoppage, those goods won't be unloaded in the harbor for import or loaded onto ships for export," he said. "The trucking industry would get backed up. It could pose problems in rail shipping and in warehousing as well."

Regulations Under Fire

The union plans to announce a specific date for the work stoppage within two weeks.

The actions are intended in part to shed light on how regulations enforced by certain government entities, such as the Waterfront Commission of New York Harbor, impede the union's ability to hire dock workers, an ILA official said.

"The Waterfront Commission is a hindrance," Kenneth Riley, ILA vice president, told Bloomberg BNA Feb. 22. "They want to determine if and when workers are needed."

Officials with the Waterfront Commission declined to comment.

The Port Authority operates the busiest port on the Eastern seaboard and is the third-largest in the U.S. More than 3 million containers are unloaded at its six terminals each year, serving 23 million customers. An estimated 36 ports along the East Coast employ ILA-represented dock workers, the union said.

"This is an industry where a one-day strike can have a huge impact," Kate Bronfenbrenner, director of Labor Education Research at Cornell University's School of Industrial and Labor Relations, told Bloomberg BNA Feb. 23. "One day is a huge loss of money."

Employer Group Cites Contract

A spokeswoman for the United States Maritime Alliance Ltd. (USMX), which represents employers in the longshore industry along the East and Gulf coasts, told Bloomberg BNA Feb. 22 the planned shutdown would violate the employees' collective bargaining agreement. "The Master Contract between the ILA and the USMX forbids any unilateral work stoppage by the ILA for any reason," the alliance said in a Feb. 22 statement. "If the ILA engages in any unilateral walkout, USMX will enforce the contractual rights of its members to the fullest."

The alliance, based in Lyndhurst, N.J., is composed of employers on the East Coast and Gulf Coast that transport cargo shipped to and from the U.S. The USMX represents management groups during collective bargaining over the master contract. ILA members ratified a labor contract in 2013 that expires in 2018.

The ILA did not respond to Bloomberg BNA's request for comment about the alliance's concern.

Watchdog Dogs Union, ILA Says

New York's Waterfront Commission investigates crime and corrupt hiring practices. But some of its own practices are causing many dock worker jobs to remain unfilled, the union said in a statement Feb. 21.

"The commission's self-created system of background checks for all that work on the now largely mechanized waterfront is resulting in job shortages throughout the Port of New York and New Jersey and damaging the U.S. economy," the ILA said.

The union and the Waterfront Commission have been entangled in similar disputes for years, Brucher said.

More than 1,000 longshoremen walked off their jobs during a labor disagreement with the commission on Jan. 29, 2016. The dispute pertained to disagreements tied to jurisdiction, hiring and technology. The workers alleged the commission was interfering in their collective bargaining agreement. The dock workers returned to work later that day after the issues were resolved.

A legal dispute between some of the same stakeholders was resolved by the U.S. Court of Appeals for the Third Circuit in August. The court ruled that the commission has authority to impose a rule meant to prevent race discrimination in hiring (New York Shipping Ass'n v. Waterfront Comm'n of N.Y. Harbor, 2016 BL 282135, 3d Cir., No. 14-3956, 8/30/16). The judges rejected arguments that the hiring rule improperly interfered with collective bargaining rights.

Reform Needed Down the Coast, Too

Riley, who is president of ILA Local 1422 in Charleston, S.C., said the South Carolina Ports Authority also is impeding the union's ability to hire workers in that state.

The union said in the Feb. 21 statement that "overregulation and governmental interference are killing jobs and reducing the value of economic activity at the ports."

The South Carolina Ports Authority "uses non-ILA members to operate cranes, receive and deliver cargo and perform other terminal work," the union said.

Such actions are leading to "unsafe dock labor, and injury to the coastal economy," the ILA said.

The South Carolina Ports Authority declined to comment Feb. 22.

On average, the South Carolina ports handle more than \$150 million in cargo daily, according to the Authority's website.

"A concern the local has in South Carolina is whether union members actually get to work in the port terminals," Brucher said. "The state government operates some of the port facilities directly, which is usually not what happens at ports."

Companies at ports usually lease pier space and hire union members to operate cranes there, he said. "In

South Carolina, there are some state employees-nonunion labor-doing that work," Brucher said. "For the ILA, that's a major concern."

The one-day shutdown is being planned at ports along the East Coast and the Gulf Coast because the 65,000-member ILA represents dock workers in those regions.

ILA members are planning to hold a one-day protest in Washington, D.C., in conjunction with the work stoppage.

Putting energy-efficient shipping on the curriculum:

The Philippines is the latest country to receive IMO support to promote energy-efficient ship operation. A workshop taking place in Manila (23-24 February) is equipping 30 maritime educators from across the country with the knowledge to introduce the topic of ship energy-efficiency into their teaching curriculums.

The event, run under IMO's GloMEEP project, is the second of its kind to take place in Asia this week - following a productive event in Malaysia (20-21 February). The focus is on delivering the IMO Model Course 4.05 to seafarers, which consists of lectures, interactive exercises and videos to enhance the learning experience. Crews trained in the Philippines will then have the necessary knowledge to contribute to reducing fuel consumption on ships and cutting associated greenhouse gas emissions.

The Manila workshop is being hosted by the Maritime Industry Authority (MARINA). IMO is represented by Astrid Dispert and a team of consultants.

The end of the Swiss federal state guarantee for cargo vessels - a trigger for the tonnage tax?:

The Swiss Federal Council decided to terminate the well-established funding instrument to facilitate the financing of Swiss owned and registered cargo vessels by issuing government guarantees. Further, the Federal Council decided not to renew existing guarantees or grant new guarantees for Swiss Ship-owners as of June 2017. The existing guarantees will continuously expire up to 2031.

Over the past years, the Swiss federal government has issued guarantees in the amount of approximately 800 Million Swiss francs in favour of a fleet of 50 vessels with a capacity of 1'812'148 DWT. In return, the Swiss federal government is entitled to seize respective vessels in case an international crisis or war situation would complicate or hamper the national economic supply.

The Federal Council justifies this decision referring to substantial risk that its guarantees will be drawn in the wake of the current crisis in the international shipping business. Further it argues that such a competence to seize and run a fleet of cargo vessels on high seas is no longer crucial for the national economic supply of Switzerland. In this context, the Swiss Government requests Swiss ship-owners to implement further

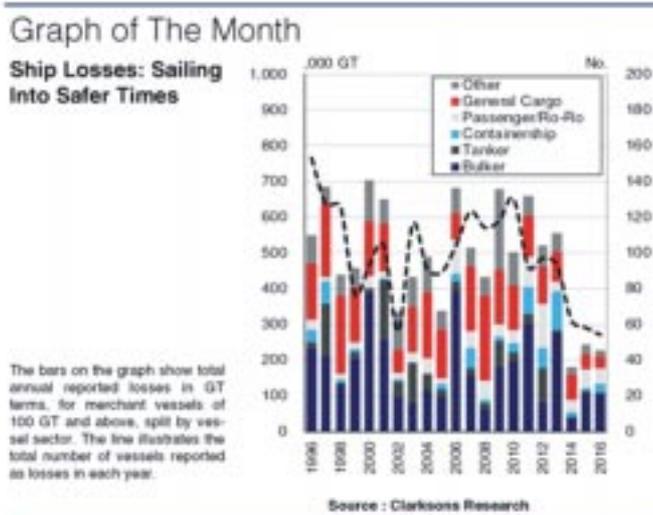
measures to improve their liquidity as well as their economic efficiency.

This is a turning point for cargo vessels sailing under the Swiss flag. The state guarantee facilitated the financing of vessels substantially and was most likely the main reason to have cargo vessels registered in Switzerland. It is therefore not only crucial but also an opportunity for Switzerland to now intensively work on a state of the art legal framework to establish Switzerland as a competitive and attractive flag state. A first step in this direction would be the implementation of a tonnage tax.

This new approach by the Swiss Federal Council forces Swiss ship-owners to restructure the financing of their cargo vessels.

Vessel Losses: Is Shipping Resuscitating Its Record?: Safety at sea has improved significantly in the past twenty years, with losses of large merchant vessels becoming a relatively rare event. Whilst casualties appear to be more common among older and smaller vessels, total losses seem to be on a downward trajectory. Even as the world fleet reached its greatest ever size, last year marked the fewest number of vessel losses on record.

Examining The Vital Signs



Although major accidents will always hit the headlines, merchant ships have in recent times been an extremely low risk form of transport. Total 'losses', when vessels are permanently lost from the fleet due to sinkings, groundings or other incidents, have been on a downward trend over the long-term despite the growing fleet. This has been supported by improvements in ship design, an increasing number of port state control inspections and a decline in the proportion of vessels above 25 years old. In 2016, reported losses reached a historically low level of 54 vessels and 0.2m GT, equivalent to just 0.02% of the start year fleet in GT terms.

Bulkers Critical?

Looking at the statistics across the major vessel types, losses have typically been greatest in the bulkcarrier sector. From 1996 to 2016 a total of 160 bulkers of 3.7m GT were reported as casualties, accounting for 36% of the total in tonnage terms. On average, bulker losses each year were equivalent to 0.09% of start year bulkcarrier tonnage. In comparison, the total volume of tanker and containership tonnage reported as losses in the same period represented 9% and 5% respectively of total losses (totalling 143 tankers and 49 boxships). Average annual tanker and boxship losses in GT were equivalent to 0.02% and 0.03% of the start year fleets in each sector. In the bulkcarrier sector, losses of larger ships have been more common, with an average vessel size of 23,247 GT, against 6,181 GT for tankers. This is likely to have been supported by stricter regulation on tanker designs since the 1990s as well as improved vetting procedures.

Smaller Ships In The ER?

Sectors with a large number of smaller units represent the majority of losses in numerical terms. In general, smaller ships account for a larger proportion of casualties, with the average size of losses peaking at around 7,600 GT in 2000. 1,033 general cargo ships were reported as losses from 1996 to 2016, making up 50% of the total in numerical terms. Meanwhile, 184 vessels were recorded as losses in the same period in the passenger and ro-ro sectors. Aside from a number of high profile larger vessels such as the "Costa Concordia" and "Sewol", the majority of these casualties were small passenger ferries, predominantly in South East Asian waters.

The long-term trend of declining vessel losses appears to have continued over the last few years. However, there is still a significant degree of variation between sectors, with older and smaller vessels also much more likely to become casualties. Whilst risk very much remains a part of shipping, the last few years appear to show that merchant shipping is still improving its safety record, with the number of vessel losses continuing to fall.

Tankers: Japan's influence on the tanker market not what it used to be:

Japan used to be one of the most important markets for the tanker industry, as crude oil imports, mainly from the Gulf Arab region were the norm for decades. This is beginning to change these days, with shipbroker Gibson noting that "the Japanese refining industry has been experiencing challenging circumstances for a number of years, with significant rationalisation of refining capacity. Reform in the Japanese refining sector is not a particularly new story; however, in March 2017, a government directive will come into effect, forcing refiners to further boost efficiency, whilst enhancing output of higher value clean products such as diesel and jet fuel. The latest directive is not the first introduced by the government and nor

would it appear to be the final phase of the industry restructuring, with further directives potentially announced later this year".

According to Gibson, "domestic consumption of petroleum products has been falling in recent years, in part due to a contraction of industrial output, more fuel-efficient vehicles and the introduction of a mandatory blending of ethanol into transportation fuels. The Petroleum Association of Japan pegged crude oil refining capacity at 3.8 million b/d at the end of 2016, with production spread across 22 facilities. However, over the coming years it can be expected that this figure will come under increasing negative pressure. In an attempt to streamline the industry, a merger between JX Holdings and TonenGeneral, Japan's largest and third-ranked refiners respectively has been approved for April 2017, creating the new company JXTG Holdings. TonenGeneral has also announced there will be reductions at four refineries in 2017 totalling 71,500 b/d, with capacity already reduced at the companies Kawasaki plant. In addition to this, Idemitsu Kosan Co, the country's second-biggest refiner, had been in discussions with Showa Shell on the potential of a merger, however, this deal appears to be off the table as it has not won approval from the Idemitsu founding family", said the shipbroker.

It added that "overall, the March directive is expected to reduce refining capacity to close to 3.57 million b/d, according to Reuters data. The introduction of a third directive, potentially later this year, will further reduce refining capacity and could also aim at reducing the number of major refiners in the country from 5 to 4 by 2020 or 2021, although this has not been confirmed. Japan's shrinking refinery capacity has had implications for the crude tanker market. According to IEA data, crude imports into the country have been falling over the past five years, down by 300,000 b/d since 2012. Although it represents a notable drop in trade volumes, this had been more than offset by increases in China's crude buying. Some support to crude tanker demand was also found in a temporary surge in fuel oil imports (on the back of the Fukushima Nuclear disaster in 2011)".



Gibson says that "with further restructuring directives expected later this year, it would appear that Japan is braced for further reductions in crude oil imports. However, as it was the case in the past, oil demand in other parts of Asia continues to grow, most notably in non-OECD countries. As such, Japan's falling demand will most likely will be absorbed by gains in other markets. What this highlights though is the declining importance of Japan in the regional crude tanker market and a growing involvement of a large Japanese fleet in international trade", the shipbroker concluded.

Meanwhile, in the crude tanker market this week, in the Middle East, Gibson said that "despite receiving final March programmes, VLCC Charterers kept to a slow pace, encouraged by easy looking availability through the current and medium term fixing windows. Rates just about held up at the bottom end of the recent range, but there has certainly been damage done and a busier phase is likely to now accelerate the softening trend. Rates operate at down to the very low ws 30's West and at no higher than ws 70 to the East. Suezmaxes enjoyed better early attention and rates did pick up a little to ws 85 to the East and into the high ws 40's West, but things quietened later. Aframaxes tightened further to allow rates to edge over 80,000 by ws 115 to Singapore, but Charterers moved onto more populous forward positions in response and to limit onward potential", the shipbroker concluded.

INDIA: There's poison in the air: One-third of Indian cities breach limits, show govt. data

Nearly a third of Indian cities have breached annual pollution limits mandated by the Central Pollution Control Board (CPCB) between 2011 and 2015, according to figures from the Union Environment Ministry-affiliated organisation.

The numbers - the latest available and updated in blocks of 4 years - sourced from 680 pollution-monitoring stations spread over 300 cities across the country, measure levels of particulate matter (PM 10), nitrogen dioxide (NO₂), and sulphur dioxide (SO₂).

94 cities crossed norms

While cities such as Delhi are usually the worst performers with regard to pollution spikes in winter, the CPCB data show that 94 cities spanning States from Andhra Pradesh to Jammu and Kashmir and Assam to Gujarat were guilty of breaching the annual, particulate matter limit of 60 micro-gram per cubic metre.

Delhi; Badlapur, Pune and Ulhasnagar in Maharashtra; and Kolkata additionally transgressed the NO₂ levels.

While cities like Delhi, Mumbai and Pune measure PM_{2.5} levels, most lack the sensors required to gauge the presence of these minute particles that are considered more toxic than the more-ommonly measured PM 10.

Crossing the limits

A total of 94 cities in 22 States have violated the National Ambient Air Quality Standards, according to the Central Pollution Control Board



- Five cities — Delhi; Badlapur, Pune and Ulhasnagar in Maharashtra and Kolkata — violated both the PM10 and NO₂ permissible levels
- The rest violated only the allowed PM10 limit
- None of the cities crossed the prescribed SO₂ limit
- 680 stations spread over 300 cities in 29 States and 6 UTs are monitoring pollution levels in India

Monitoring and enforcing pollution limits was done by the State pollution control boards and the Centre could only send advisories, according to officials.

"The CPCB can only give guidelines on controlling air pollution, it is up to the States to implement them," said D. Saha, Head, Air Pollution Monitoring, CPCB. He added that the agency only calculated average figures because there was tremendous variation within a year among cities, mostly on account of rainfall.

The numbers come on the back of international research reports attributing about a million deaths in India to air pollution. The Environment Ministry has said these mortality figures were "extrapolations without due scientific validation" but hasn't countered with numbers of its own. It is, along with the Health Ministry, working on a study to assess 'official' mortality from air pollution.

Key directives by the Centre to the States to control particulate matter pollution include promoting public transport, improving fuel quality and fuel efficiency standards and banning burning of leaves, biomass and municipal solid waste.

A Long Winter for Shipping: As the landlubbers in the Northern hemisphere struggle to cope with extreme weather conditions, shipowners continue to deal with unprofitable markets in most sectors.

The excess supply of ships continues to face no growth in demand for their services while new newbuilding orders have emerged as shipyards continue to lower their prices.

The average age of the operating ships remains historically low whilst the ship recycling industry continues to offer low prices and itself faces reduced demand for the recycled materials. Mid-size container ships dominate this market as more mega-ships continue to deliver causing a trickle-down effect into the feeder trades.

The public face of the shipping industry is mainly the publicly traded companies quoted in New York and Oslo but these collectively represent only 30% of the fleets trading in most sectors. However it is reasonable to assume that the freight markets affect all shipowners even though the majority does not report their results.

The major factor affecting the industry today is the

virtually complete withdrawal of commercial banks from funding the shipping industry including the Offshore Supply Vessel sector. The level of non-performing loans is enormous and most owners can only pay interest on their debts but no principal. Ship values continue to decline as they are physically depreciating assets causing much of the debt to be under-secured.

Creative funding from the private equity and hedge funds has done little to relieve the decline as the issue of insufficient income from the freight markets continues to dominate.

It is ironic that the cargo owners have not obtained increased demand for their products or expanded their markets because of the cheap freight rates. Thus the losses being experienced by shipowners have benefited nobody and shipowners need to collectively resolve to drive freight rates up.

Returning to time charters and contracts of affreightment can secure the relationship between shipowners and cargo interests who need their products moved.

We have seen the catastrophic effect of a shipping bankruptcy with Hanjin, where thousands of loaded containers were stranded on ships and in terminals and the cargo owners were forced to pay to recover their products and deliver them to markets.

Another serious issue that the low freight rates have caused is the forced reduction of operating costs. This has resulted in cheaper less experienced crews, minimal spares and poor maintenance.

While new ships can operate on minimal operating costs, the mandatory surveys will become increasingly expensive if this continues. Much of the speculative capital that has come into the industry in the past few years was expecting a profitable return in 5 years or less. This has not materialized and instead more capital is needed to fund the cash flow shortfalls whilst the asset values continue to decline.

Recent bankruptcy filings have evidenced the fact that there is little or no equity remaining in the industry and that the banks are looking to get out before their security diminishes further.

This is of serious concern to the cargo interests who need to pay more for the services they need and secure those services on period contracts.

It is highly unlikely that world trade will grow over the next few years until there is greater global stability and reduced warfare in the Middle East.

Chinese demand for raw materials and energy goods has reduced already and shows no signs of increasing while their export of manufactured products has also stalled. They will continue to build ships and provide export finance provided they are operated in Chinese trade thereby controlling the freight costs.

The oil markets will continue to operate at marginally profitable levels in both crude and products but face intrusion for the new Iranian and Iraqi tanker fleets. The

reduction in the size of the fleets owned by the oil majors will present opportunities for time charters but only for the financially strong shipowners.

The new US Government's determination to become "energy independent" will certainly affect the tanker industry but the USA could well become an exporter of oil when the new pipelines are built but new oil terminals will need to be built also.

Finally the Offshore Supply Vessel industry is in deep trouble as the reduction in drilling activity in the Gulf of Mexico and the progressive shutdown of the North Sea, as well as little or no offshore work anywhere else, have combined to create a huge fleet of laid-up vessels and a number of bankruptcies, with no end in sight.

Bigger shipping companies with strong equity capital for the long-term and affordable bank debt will be the future for an industry whose services will be needed for the long foreseeable future.

Minor Bulk Trade: Indonesia back in the Game?: Seaborne minor bulk trade is estimated to have remained steady at best in 2016, making it the third consecutive uninspiring year of minor bulk trade growth following the introduction of Indonesia's refined mineral export ban in January 2014. Indonesia is now set to restart bauxite and nickel ore exports in 2017 which, given the country's previous key role, may help to change minor bulk trade dynamics.

Two Distinct Periods

Seaborne minor bulk trade is estimated to have dropped 0.3% to 1,851mt in 2016, partly due to a sharp drop in bauxite and nickel ore shipments. This contributed to average seaborne minor bulk trade growth of only 0.5% pa. in 2014-16, compared to 4.9% pa. in 2011-13. This notable drop in the pace of total minor bulk trade growth between the two periods coincided with the introduction of Indonesia's mineral export ban in 2014.

A Big Presence On The Pitch

In the three years prior to the ban, Indonesian minor bulk exports grew by an average of 35% pa, accounting for almost a third of total minor bulk trade growth. This expansion was driven by a firm rise in the country's bauxite and nickel ore shipments, which hit a combined 120mt in 2013, accounting for 64% of global seaborne exports of these commodities. The majority of this volume was shipped to China, with buyers building up stockpiles ahead of the mineral export ban.

A Decision To Bow Out

In January 2014, Indonesia introduced its ban on unprocessed mineral exports, including bauxite and nickel ore, in a bid to promote the country's processing industry. The emergence of alternative exporters such as the Philippines and Malaysia failed to fill the gap left by Indonesia, leading to an average 12% pa. drop in combined seaborne bauxite and nickel ore trade in 2014-16, compared to a 29% pa. rise in 2011-13. Overall, while declining trade in agribulks, scrap metal and some other

commodities have also undermined recent minor bulk trade growth, the disruption to bauxite and nickel ore trade which followed the Indonesian mineral export ban accounted for over 75% of the change in overall minor bulk trade growth between the two periods.

Back In The Game

Then in January 2017, Jakarta unexpectedly relaxed its mineral export ban. Given ongoing disruptions to Malaysian and Philippine mineral exports, Indonesia's return may provide a well timed source of minor bulk trade growth. In the short-term the impact is likely to be limited, with Indonesian exports of nickel ore and bauxite expected to displace shipments from other exporters and total around 10-15mt combined in 2017. However, given the country's previous role as the key bauxite and nickel ore exporter, the longer-term implications may be more significant.

So, while a wide range of commodities contribute to global seaborne minor bulk trade, volatility in seaborne bauxite and nickel ore trade as a result of Indonesian export policy has been a key factor in shaping overall minor bulk trade growth trends in recent years. Looking forward, while the impact of Indonesia's return may at first be fairly gradual, it has the potential to change the minor bulk game.

Demand is picking up in the dry bulk market:

Pacific Ocean dry bulk trades are starting to push the freight market to new heights recently, offsetting part of the limited activity in the Atlantic market. According to the latest weekly report from shipbroker Allied Shipbroking, "we have started to see some sparks of life in the commodities markets these past weeks, with prices having shown a strong push during the past couple of days especially for iron ore. This has been in line with the restart of the main trade growth engines of the Far East which have started to gain "steam". Chinese exports showed a year-on-year rise for the first time in ten months, while S. Korea has been showing increased figures in exports for the past three months in a row. This is not just limited to these two players in the region, with strong exports being in the works for Japan, Singapore and Taiwan.

According to Allied Shipbroking's George Lazaridis, Head of Market Research & Asset Valuations, "it seems as though the Far East's manufacturing power houses have started to regain their strength, pulling in with them several commodities and possibly paving the route for increased demand for trade as other countries in the region start to slowly take up the role of low-end manufacturing hubs. This in combination with a more optimistic views on the global economic growth figures for this year and it seems as though the slowly growing optimism in the markets is gaining pace".

Still, as Lazaridis points out, "the Trump effect however still looms in the background, providing good reason for most to keep a restrain on optimism. Most of these

increases in trade in the Far East are boosted by the high-tech industry and although consumer confidence seems to be in better shape than it has been during the course of the past couple of years, any strains that start emerge between nations and any increase in tariffs could dampen the positive gains. The U.S. is still an underlining risk in this regard as it threatens to close of its borders through increased tariffs. This is not just limited to end consumer products but leaves a risk in several commodities. In reference to this latter point, it is worth mentioning that although it will be hard to create a real alternative for all this raw resources the U.S. imports, any increase in tariffs will surely hurt consumers within the U.S. while any decreases in the purchasing power could easily erase any growth in trade that would be hoped for".

Allied Shipbroking's analyst added that "for the moment however we seem to be seeing a more optimistic side to the market. Trading of the steel industries main ingredient rose by 7 per cent, reaching their highest level since 2013. At the same time, seaborne trade coal has seen good news pile on, with the recent announcement by China of a ban on coal imports from North Korea leaving many local steel mills to scramble in order to find alternative supplies (many of which will likely be from sources further away). All this will help further boost the freight market in the Pacific, which since the early part of February has already shown positive signs and strong activity levels. The problem at the moment however has been the slower feel of the Atlantic which has starved the overall dry bulk markets from support that could help easily drive a fair rally".

Lazaridis concludes though that "nevertheless, if activity in the Pacific manages to hold off at such strong levels during the remainder of the first quarter and even through onto the second quarter of 2017, the market should start to show some fairly strong levels once the grain season in the Atlantic goes into full swing. For the moment it seems that we have a lot of favourable winds moving in the dry bulk market's direction. A lot is riding on how well the Asian powerhouses will be able to feed off their own gains and show greater self-reliance rather than being as dependent as they have been in the past to the purchasing power of consumers in the U.S. and Europe", Allied's analyst concluded.

INDIAN NAVY: The Indian Navy's second ocean going sailboat Tarini will be inducted at a ceremony scheduled to be held at the INS Mandovi Boat Pool on evening of 18 February 2017. Admiral Sunil Lanba, Chief of Naval Staff will also be present on the occasion. INSV Tarini is a sloop built by M/s Aquarius Shipyard Pvt Ltd at Divar, Goa. The sail boat Tarini is being inducted into the Navy and is slated to be the platform for First Indian All Women Circumnavigation of the Globe expedition of the Indian Navy.

The boat has been built to a stock design by Van de Stadt, Netherlands called Tonga 56. The hull is made of

wooden core fiberglass sandwich construction for a better performance than aluminum and steel. INSV Tarini carries a suite of six sails including a Main sail, Head sails (Genoa and stay sails), Downwind sails and Storm sail.

Her mast is 25 meters tall and has been custom built by M/s Southern Spars, Cape Town, for sailing in extreme



conditions. She boasts a Raymarine navigation suite and an array of latest satellite communication systems through which she can be contacted anywhere in the world.

The trials of the newly built INSV Tarini were successfully completed on 30 January 17 and all the learning experience from INSV Mhadei has been incorporated in this vessel right from the start. The keel of the vessel was laid by the Defence Minister, Shri Manohar Parrikar on 27 March 2016 at the Aquarius Shipyard. The construction was diligently overseen by the Warship Overseeing Team, Goa and the vessel is being delivered before the scheduled date of delivery by the boat builder. The successful construction of both the Mhadei and Tarini in Goa are a tribute to the Government's 'Make in India' policy.

INSV Tarini is almost identical to her illustrious predecessor, the iconic Mhadei which has sailed over 115000 nautical miles in the past eight years. This includes path breaking voyages like the first Indian solo circumnavigation undertaken by Capt Dilip Donde (Retd) in 2009 and first solo, non-stop and unassisted circumnavigation by Cdr Abhilash Tomy in 2013.

The boat draws her origin from the famous Tara-Tarini temple of Orissa's Ganjam district. The word Tarini means a Boat and is also a Sanskrit word for Saviour. Tara-Tarini is a patron deity for sailors and merchants and is worshipped for safety and success at sea. Tara-Tarini of Orissa is known to have historical linkages with the river Goddess Mhadei- the exclusive boat deity of the Mhadei river of Goa. Both the deities Tarini and Mhadei have sculptural similarities.

In order to promote ocean sailing activities and to encourage women empowerment, the Indian Navy

conceptualized the idea of the First Indian All Women Circumnavigation of the Globe. A team of six women Officers led by Lieutenant Commander Vartika Joshi was selected for this project. These officers have done basic sail training courses at INWTC Mumbai followed by Navigation, Seamanship, Communication and Meteorology courses at various naval training schools at Kochi. After completion of theoretical courses, the officers sailed INSV Mhadei to Vizag for the International Fleet Review 2016 and thereafter to Mauritius and back. Following that, they sailed the boat on a grueling voyage to Cape Town in Dec 16.

The boat is skippered by Lieutenant Commander Vartika Joshi and crew members include Lieutenant Commander Pratibha Jamwal, Lieutenant Aishwarya Boddapati, Lieutenant Patarapalli Swathi, Lieutenant Sh Vijaya Devi and Lieutenant Payal Gupta.

HMM To Acquire Four Terminals From Bankrupted Hanjin: On 16th February, Hyundai Merchant Marine announced that it has entered into a contract with Hanjin Shipping and Marine Terminals Investment Limited (MTIL) to acquire Hanjin Pacific Corporation's 100% stake in terminals in Tokyo and Kaohsiung.

Hanjin Pacific Corporation (HPC) which is owned by Hanjin Shipping (60%) and Marine Terminals Investment Limited (40%) operates terminals at ports in Japan (Tokyo) and Taiwan (Kaohsiung).

Total acquisition price is about KRW 15 billion (\$13.15 million) including a purchase and security deposit on the lease of the Tokyo port.

With this acquisition, HMM will secure four Hanjin's terminals: TTI Long Beach (20%), Algeciras (100%), Tokyo (100%) and Kaohsiung (100%).



HMM plans to complete the acquisition of Hanjin Pacific's stake followed by detailed due diligence and regulatory approvals for each port.

HMM said "This acquisition of Hanjin Pacific's stake will work to expand HMM's port network and strengthen our sales competitiveness." And "We greatly expect that it will have a synergistic effect with HMM+K2 consortium, which starts on March 1st."

Norwegian Cruise Line Announce Order Of Four Next Generation Of Extraordinary Ships: Norwegian Cruise Line Holdings Ltd. today announced it has reached an agreement with Fincantieri S.p.A. to construct the next generation of extraordinary ships for its Norwegian Cruise Line brand. Four ships are on order for delivery in 2022, 2023, 2024 and 2025, with an option for two additional ships to be delivered in 2026 and 2027.

The four 140,000 gross ton ships will each accommodate approximately 3,300 guests. The new class of ships will build upon the highly successful offering of freedom and flexibility found on the brand's most recent Breakaway-Plus Class ships and feature a host of innovative designs that will further elevate its already award-winning guest experience. A priority of the prototype design is energy efficiency, with the aim of optimizing fuel consumption and reducing the impact on the environment. Details on the ships' many innovative guest facing and first at sea features will be announced at a later date.

"This new class of ships will continue Norwegian Cruise Line brand's legacy of introducing meaningful innovation to the cruise industry," said Frank Del Rio, president and chief executive officer of Norwegian Cruise Line Holdings Ltd. "This order continues to highlight our disciplined newbuild program, extends our growth trajectory well into the future, enhances our already attractive earnings profile, and drives expected long-term returns for our shareholders."

"For the past 50 years, Norwegian Cruise Line has been focused on offering our guests the very best in cruising," said Andy Stuart, president and chief executive officer of Norwegian Cruise Line. "It is with great excitement that we look ahead to our next 50 years, which includes this next generation of ships that will offer guests the innovative experiences that have come to define the Norwegian Cruise Line brand."

"We are extremely excited to collaborate with Norwegian Cruise Line and this partnership allows us to include a new prestigious client in Fincantieri's portfolio," said Giuseppe Bono, CEO of Fincantieri S.p.A.

"We are very proud of the innovative design of these ships and recognize the various stakeholders of the export chain who have contributed decisively to achieving this goal. The significant value of the order will provide substantial economic benefits by extending the employment horizon of our shipyards, and we are honored to support the growth of our country's economy."

The contract price for each of the four vessels is approximately \$800 million per ship. The Company has obtained export credit financing with favorable terms to fund 80 percent of the contract price of each ship delivered through 2025, subject to certain conditions.

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